ABSTRACT OF THE DISCLOSURE

The present invention relates to a simplified reference current generator for a magnetic random access memory. The reference current generator is positioned in the vicinity of the memory cells of the magnetic random access memory, and applies reference elements which are the same as the magnetic tunnel junctions of the memory cell and bear the same cross voltages. The plurality reference elements are used for forming the reference current generator by applying one or several bit lines, and the voltage which is the same as the voltage of the memory cell is crossly connected to the reference elements so as to generate a plurality of current signals; and a peripheral IC circuit is used for generating the plurality of midpoint reference current signals and judging the data states. By means of the midpoint current reference signals, the multiple-states memory cell, including the 2-states memory cell, can read data more accurately.